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NOTEBOOK NO. 82 (Excerpts)

Assigned to: H. Blauer

Department: Operation

Division: 901

2-24-50

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ChemRisk Document No. 2044

This document has been approved for release to the public by:

David L. Hamman 7/21/95
Technical Information Officer Date
ORNL Site

- 3-12-50 1. Delivered SLUG CHARGER TO 106 BUILDING.
 8-4 2. MAINTENANCE REPAIRED STEAM TRAP ON
 R.L.N. W-7 Jet.
 3. TURNED ON W-7 TO W-6 Jet AT 10³⁰ AM
 SAMPLED FOR U, P4, + SP. G11.
 4. MAINTENANCE REPAIRED LIGHT BULBS 706 D
 SLUG LOADING PLATFORM.
 5. CONTINUED WITH PRESSLEY'S COLUMNS.
 6. DID NOT DRAIN THE A-4 LINE THIS SHIFT.

3-12-13 4-12 H-B.

1. Continued Pressley's columns.
2. Continued evaporator. Dropped run 317 and started run 318.
3. Cut off AH-205 jet and left draining through shift change.
4. Phoenix carriers were left on truck until truck could be finished unloading on 8-4 shift.

3/13/50 ① Continued Pressley's two columns.

12-8 ② Continued jetting W7 to W5.

Schairh ③ Loaded 73 slugs into A1. Was only able to load 15 at a time as the ^{last} slug would not drop. Don't know whether basket is bent or machine doesn't open far enough.

④ Made up 4% caustic in M10

⑤ Made up 2nd coating removal solution.

⑥ Brought 2 Hanford slugs to 706C FI return.

- ① Brought irradiated units to 902 Bldg.
- ② Cleaned charging machine to < 10 mc. It is in 706-D dec. room.
- ③ Continued evaporating
- ④ Run Status: A1 - 1st coating removal washes.

3/13/50

- 8-4
- ① Took slug charger back to 706 H.B. Bldg.
 - Sachs ② Dumped Acids
 - ③ Continued Evaporating.
 - ④ Brought skyshine source to 3rd level.
 - ⑤ Run Status:
A1 - dissolving just getting underway.
 - ⑥ Ran W7 - W5 jet all shift.
 - ⑦ Put a new tygon tube on the S.B. composite sampler.

3-13-50 ① Continued evaporation at T.F.

- 4-12
- OLSON
- ② Started plating 2 Co pellets (1-1cm long; 1-2cm long) in 908; completed the copper plating and water washes; the pellets are in the plating beaker inside the barricade; roped off the area behind 908. Both pellets came from beaker #21.
 - ③ Checked I^{131} dissolving in 706-C; took hourly readings
 - ④ Cut off jet from W-7 to W-5; sampled for U, Pu + Sp. gr.; steamed out line.
 - ⑤ Cleaned pots twice; HP first count showed 2 "hot" spots; 2nd count in the hands of HP yet. (HP counts below 50) (green tagged)
 - ⑥ Checked column for Trishaw hourly; changed beakers every 3 hrs. (1500 ml); sampled twice; samples in lab. *
 - ⑦ Checked large blowers, small blower + dampers.

(* next sample + bottle change about 1am)

⑧ Sp. gr. in 1st slug dissolving in A-1 about 1.7 at shift change.

3/14/50 ① Shut down 900 area off gas flows.

12-8 ② Are you going to repair A16 separator valve?

Schaich ③ Phoenix carriers ready to go.

④ Continued Rimshaw's column. ^{adding 3000 ml wash at shift change.} Took two samples.

⑤ Melted out two sulfur cans and started extraction 7 A.M.

⑥ Maintenance repaired steam regulator valve at E.V.

⑦ Did not touch cobalt. Status same as last shift. Had no exposure time.

⑧ Checked F-I dissolving in "C" Hdg.

⑨ Made up batch 4% caustic.

⑩ IMA analysis 3083 c's S.T., 40.85 slug, 488.5 c'g/dug.

⑪ Continued evaporating. One foam over while using by-pass on steam line.

⑫ Run Status: A1 - Batch B dissolving

A9 - Batch A settling cold till 11:30 AM.

3/14/50

8-4 ① Instrument man checked slug-shine sources.

Sachs ② Completed Cobalt plating run and took pellets back to the File canal.

③ Competitors installed chains on Ammonia cylinder carrier + under shed.

④ Analysis: 8WMA, 163 c's S.T.

⑤ Run Status:

A1 - Batch B coming up to gravity.

A9 - Batch A extraction heels.

A11 - 8WMA settling until 5:40 p.m.

A5 - Carbonate - NO T.S.P. NOTE (600# 5% N_2CO_3)

- ⑥ Received metal ~~waste~~ waste into W9 from Semi-worles via W12.
- ⑦ Continued Evaporating.
- ⑧ Made up 40" of 4% Caustic.
- ⑨ Brought Product and glassware rinse carriers over to 3rd level, but didn't have time to put the paper on them.
- ⑩ Figure this one out if you can! Turning off the A16 Fan gives 2" more off-gas in A1. ???

- 3-14-50 OLSON
- ① Removed run #310 extract and started 2nd extraction at 8:30 pm. Transferred extract to 204 bldg. and started evaporation down to 50ml. Evaporation still going at shift change.
 - ② Completed melting out Hanford slugs (run #311); added water + acid and began extraction at 6 pm.
 - ③ Took 2 cuts on still + transferred I¹³¹ to room 10; reduced volume.
 - ④ HP smeared product pot; bottom of pot "hot"; cleaned + had HP smear again + O.K.
 - ⑤ Covered glassware rinse carrier; did not cover prod. carrier.
 - ⑥ Checked Kimshaw's column in the 910 bldg.; collected * 1500ml cuts as previously and sampled 3 times; sample to lab.
 - ⑦ HP smeared 2 yellow carriers in 903 bldg.; also smeared yellow hook; all O.K.
 - ⑧ Continued evaporating at T.F.; started run # 322 about 9 pm
 - ⑨ Run status:
 - A-1 Heel dissolving going until 8 am Wed.
 - A-9 Batch B settling cold until 4:15 am Wed.
 - Jetted batch A waste metal from A-5 to W-9; pH of waste metal in A-5 was 9. (no additional carbonate used)
 - ⑩ Analysis: 1MB 2429 C's; 40.95 slugs 67.4 c. per slug

6 WMA 108 C's at S.T.

① Holzgraf suggests that both bottles of copper plating solution be filtered before they are used.

② Picked up chokers from 105 for the Phoenix carrier; placed in low storage

③ (* next bottle change about 1:30 am)

3/15/50 ① How about day shift getting a big supply of 32oz bottles?

12-8 ② Continued Kinschaw's column

Schaich ③ Pulled Hamped extraction & started re-extraction at 6:30 AM.

④ Finished boiling down P⁸² at 304 Pkg.

⑤ Made one cobalt run. 1-1cm + 1-2cm from beaker #21 to beaker #33.

⑥ Covered the product carrier. All means < 214 C's/min

⑦ Continued evaporating. Dropping run at shift change

⑧ Run status: A1 Shed dissolving

AA - 8 WMB setting (10:30 AM)

AA - 2nd H₂O wash setting (8:50 AM)

⑨ Filtered one bottle of CuCN solution.

⑩ Steering wheel on electric lift truck seems to be sticking at certain spots.

3/15/50

8-4

Sachs

① The M.I.T. boys are playing with the Thion Precipitators. Opening the duct to main system • increases A and B Cell Vacuum about .25 of an inch.

② Received 2300 gals of waste into U5 From 706 HB.

- ③ Continued Evaporating. Dropped Evp. level to 35" at 2:50 p.m.
- ④ Analysis: 6WMB, 60.5 S.T., 8WW 30.1 S.T.
- ⑤ Dumped 1540 gms waste from semi-works into W7.
- ⑥ Run Status:
 - A1 - Heels dissolved and sampled, hold.
 - A9 - 1st Metathesis settling until 4:48 p.m.
 - A8 - 5 liters HNO_3 , 15 liters H_2O
 - A11 - 6WMB heel and 8WW, hold in A11
 - A6 - M.T.
 - A5 - Neutralized 6WMB, pH not taken, 700 lbs Na_2CO_3 used in this batch.
- ⑦ The painting of all lines on the tank farm was started.

- 3-15-50 ① Checked Kirschner's cal. in 910 bldg ^{hourly}; collected 1500 ml
4-12 cuts every 3 hours; samples to lab; next bottle change about 1 am
- OLSON ② Checked I^{131} run every hour; temp. up to 98 at 11 pm; reflux water to run all night; next reading at 12:15 am
- ③ Plated 2 Co pellets (1-1 cm long; 1-2 cm long); completed silver plating + washes; left in barricade in 908 bldg.; ~~these~~ samples should be returned to pile canal by 8 am; pellets from beaker #21
- ④ Turned off the S.S. off-gas blower.
- ⑤ Continued operation of evaporator at T.F.
- ⑥ Filled P^{32} run at 209 bldg.; ⁱⁿ ready to go to #2 evaporator at shift change.
- ⑦ Checked large blowers + dampers.
- ⑧ Run status:
A-1 dissolved heels; sampled; hold
A-5 M.T.

- A-6 neutralized waste - batch B - hold
 A-8 2nd metallurgy waste
 ✓ A-9 3rd metallurgy cooling until 12:15 am
 A-11 heels from batch B + 8WW
 (pH of neutralized waste 6WMB was 8 before → A-6)
 (Pile bldg. sent us fan seal water without notice (W-1 5'-8"))

3/16/50 ① Placed 4-12 Co pellets in beaker #33 and brought
 12-8 1-1cm + 1-2cm pellets from beaker #21 to 908. Plated them
 Schaid and returned to beaker #33. (Pb pig in Dev. truck)

- ② continued Rimshaw's column.
 ③ continued evaporating.
 ④ Checked "C" Bldg FI Shell dissolving.
 ⑤ Run Status: A1 - heels.

A6 - neut. 6WMB

A8 - 8WC + 1st part 8WCW

A9 - 2nd H₂O wash sitting till 8:40 AM.

A11 - heels + 8WCW

⑥ 8WC - 608 c's S.T.

⑦ Finished up P³² run and brought product to 902 Bldg.
 Did not sample.

⑧ Cleaned up Co equipment + area.

⑨ P.B. sampler is not operating properly. Didn't get
 a chance to fix it.

3/16/50

8-4

Sachs

① Steamed off B19 head heater for 45
 minutes.

② Brought up Rubber gloves, Fuming Nitric
 and clean graduates to glassware panel-board.

- ③ Steam lines at the Evaporator were painted.
- ④ Run Status:
 - A9 - A9 Rinse sampled
 - A11 - SWMB heel and 8WW
 - A1 - heels dissolved
 - A5 - MIT
 - A6 - Neutralized GWMB
 - A8 - 8WCW sampled
 - B12 - Product electrolyzing at 25 amps. until 7:40 p.m.
- ⑤ Analysis:
 - 8WCW - 591 L.S.T., A9 Rinse 39 L.S.T.
- ⑥ Moved Skyshine Plate to 3rd level end pet in scopes.
- ⑦ Repaired D.B. composite sampler.
- ⑧ Site "Y" truck is parked at East Platform.

- 3-16-50
4-12
OLSON
- ① Watched transfer of crude I¹³¹ from evap. to flask; needle valve was stuck but finally got it open; washed.
 - ② Checked P³² run at 204; when adding HCl to crude evaporator, the flask broke (probably too hot); took up P³² from #2 evap. + reran (samples to lab) (but no ppt. tube, so did not take ppt. sample); sample # 31A-B
 - ③ Checked Kinshaw's column in 910 bldg.; sent 2 samples to lab; next bottle change about 12 MN.
 - ④ Checked large blowers + dampers; shut down S.S. off-gas blower.
 - ⑤ Continued operation of evaporator at T.F.
 - ⑥ Run status:
 - Timed filtration at 7" vacuum 7 min.
 - A-1 heels dissolved.

3/1
12
Sc

3/1

A-5 MT.

A-6 neutralized 6 WMB

A-8 8 WCV sampled.

A-9 A-9 mine sampled.

A-11 8 WMB heel + 8 WW

B-6 evap. to 350 ml.

B-1 Sr B-12 Pb

⑦ Analysis: 6P 3578 c's @ S.T.

3/17/50 ① Placed broken pieces of P^{22} evaporator into HCl
12-8 solution at 204 Bldg.

Schick ② Continued Rimshaw's cleanup.

③ Continued evaporating.

④ Run Status - All same as 4-12

B6 - Rinse sampled

B3 - 20 liters H_2O

B1 - HCl other Run 39 WD

B21 - Product 1st HNO_3 filtering

⑤ B6 Rinse - 27 c's S.T.

3/17/50

① Run Status:

B1A - Product Evaporating to dryness

B12 - 1st shot of Pb removal solution.

B10 - 3 WFN sampled - 78 c's S.T.

B17 - HCl other waste sampled - 255 c's S.T.

Cell A tanks same as Before.

② Relamped the Bldg.

③ Received metal waste from semi-weekly
into W9 ~~Room~~ via W12

④ Started new wrapping product carrier.

- 3-17-50 ① Checked Kimcham's 2 columns in 910 bldg. See
 4-12 instructions there. ~~See~~ ^{Page} 1500ml in small column
 OLSON at 9:45 pm.
- ② HP checked floor area in bldg. 204. O.K. (p.p. antisip)
- ③ Removed product carrier
- ④ Checked both large blowers + dampers.
- ⑤ Wired plywood box to product carrier.
- ⑥ ^{Skyshine} Analyzers: radiation thru steel plate: $32.5 R/hr$.
 at 10:15 PM. ≈ 3440 curies; product dark brown; black in bottom
 + sides of cone
- ⑦ 3rd level 706-D; "hot" paper on floor + in hot can.
- ⑧ Did not have any radiation time to decontaminate
 cone adapter.
- ⑨ Truck left ORNL at 12:15 am 3-18-50.

12-8

Newton 1. Pulled Glassware Rinse and stored East
 Bailey of cell B.

LEMONS 2. Removed Air Line Mask and Hose from
 Third Level to make up room have not been
 cleaned.

3. Completed Glassware + cell B. Rinses, also
 A-9. A-13 - B-12 B-7 + 8 Rinses.

4. Combined all waste from Run in A-5,
 Neutralized But pH not taken.

5. Stored Skyshine plate over North Hot Lab.

6. H.P. Took fifteen smears of Third Level
 most of them are hot, some as high as
 29,000 alpha's hot are marked with chalk.

7. Removed hot can 75 R/HR job from
 Third Level to burial ground.

④ Checked the bearings on the 900 area blower; seem to be normal; checked dampers + blowers.

⑤ Run status:

A-1 - 1st Coating Removal - last water rinse at shift change

⑥ Made up ^{35%} NaOH for 2nd coating removal; in T-9 carrier from

4-9-50

8-4 Blower ① Unloaded 2 trailers and 1 - 2 1/2 ton truck. Unloaded 2 Phoenix carriers inside, out top + bottom. H.P. smeared. No results yet.

② Cut evaporator operations back to 200 gals/hr.

③ Checked steam engine.

④ Repaired valve handle on new valve to wap sampler

⑤ Relamped where necessary in 706-D

⑥ Brought I, 31 slug carrier to 105 bldg.

⑦ Run status - Batch A dissolving in progress.

4/9/50 ① Run Status - A1 - Batch A almost to Sp's.

4-12 ② Peled, scraped, brushed, and scuffed Chalk Schaink River Pots. H.P. has smeared them. 12-8 check

③ Re-scuffed hot spots on Phoenix carriers and H.P. resmeared. Pipe dozed all plugs + caps and put them on respective carriers. There is one Chalk River Pot that the lid will not fit down. The basket seems to be in as far as it will go.

④ The electric motor with the S.S. brush is probably hot.

We used it to remove paint from carriers.

⑤ Made up batch of 4% caustic.

⑥ Continued evaporating.

⑦ H.P. just reported - Chalk River carriers

are okay. Smear #142 on Phoenix still read 100.

- 4-10-50 ① Continued operation of evaporator at T.F. at 200 gph.
 12-8 ② Checked blowers + dampers.
 OLSON ③ Checked S bearing on small blower O.I.C.
 ④ Checked steam engine at 205 stack.
 ⑤ Cleaned one Phoenix carrier + 2 Chalk River carriers twice and had smeared twice;
 ⑥ Cleaned slug charger + returned to 205 bldg.
 ⑦ Picked up pile isotopes; they are on large truck outside bldg. 901
 ⑧ Run status:
 A-9 Batch A extraction settling 4 hrs. cold until 9⁰⁰ am
 A-1 Batch B dissolving coming up to sp. gr.
 Analysis: IMA: 36.8 slugs; 193.3 c's/slug
 4243 c's at A.T.; 3586 c's total at S.T.; 53,685 c's (gross B)
 (The lab reran the analysis on the no. of slugs; the first time they got 34.5 slugs and 122.8 c's/slug.)

- 4-10-50 ① Maintenance put stops on windows in Coaps. so nobody will bust their fingers. Also put door check Bauer together to prevent further broken windows
 ② Stopped 14B dissolving at sp. gr. of 1.71 ten order not to lose time.
 ③ Finished assembling product carrier. Put gasket on plug.
 ④ Received waste from B30 → WF
 ⑤ Sent 5 Chalk River carriers to 706 H-B for storage.

⑥ Picked up two transfer vessels at glass shop.
+ stored in 700-D.

⑦ 800 MA 433 C'S S.T.

⑧ Run Status

M1 - Na_2CO_3 (No T.S.P.).

A5 - MT

A6 - ~~Batch A~~ Not Sampled

A9 - Batch B.

A1 - MT - slug heels

A11 - MT.

4/10/50 ① Received waste A8-W15 from 205.

4-12 ② IMB Analysis - 2624 C'S S.T., 96.9 C'S/slug, + 31 slugs.

Schaich 6WMB " - 30.4 C'S S.T.

③ Checked FI dissolving in "C" Bldg.

④ Brought in acid from E. Platform + put new roll of paper in holder.

⑤ Started fuel dissolving.

⑥ Finished acid wash and started H_2O wash on columns 4, 5, + 6 in 910 Bldg. Continued water wash all night. Discard effluent.

⑦ Received 372 gals metal waste into W09 from A6.

⑧ Valve group #1 reads 200 mc and W15 float reads 2R.

⑨ PB2 #7 micromax seems to be paywire. A9 cooling stayed at 60° for 3 hours then dropped to 30° . Instrument man couldn't find the trouble.

⑩ High air count in "C" Bldg from 7:30 to 10 PM. Diss. vacuum okay. Very little vacuum on cell. Closed all doors to other cells in Bank.

- ⑪ Temp. on "C" Bldg dissolving dropping but can't stop it using by-pass.
- ⑫ Took up extraction at Bagle Bagle and started boiling down at 204 Bldg. ^{1h. to go. Heat is} shut off at shift change.
- ⑬ Scrubbed smeared, and rescrubbed casks in 903 Bldg. H.P. has not resmeared.
- ⑭ Continued evaporating.
- ⑮ Revised N Tank Farm Procedure & Map.
- ⑯ Run Status: A1 - fuel dissolving
A5, A6, A11 - MT
A9 - Batch B Extraction
- ⑰ Air count going up in "C" Bldg at shift change.
- ⑱ Continued stopping N off of Col. #2 in "C" Bldg. Shut down once due to air count. Back in operation at shift change.

- 4-11-50 ① Continued operation of evaporator at T.F. at 200 gal/hr.
- 12-8 ② Checked steam engine at 205 stack.
- OLSON ③ Checked 3 columns for Kinschaw in 910 bldg.
- ④ Checked column for Shallert in 706-C
- ⑤ Checked I¹³¹ run in 706-C until Campbell reported in.
- ⑥ Brought down 2 sulfur cans from the file bldg., but had no glass tubes into which to melt the sulfur; tubes in glass shop were still in the furnace; left the ⑦ 2 S cans under leadplate at Bagle-Bagle.
- ⑦ HP checked N tank farm area + roped off high radiation areas around valves group #1 + W-15 float.
- ⑧ Checked blowers + dampers + bearings on small blower several times.

⑨ HP smeared the 2 Hanford shipping casks in 903 bldg; O.K.; green tagged

⑩ Evaporated down extract in crude evaporator in the 204 bldg. to 50 ml.

⑪ Run status:

A-1 Heel dissolving sampled at 7:15 am

A-9 Batch B extraction; 3rd W.W. ready for decant 8:05 AM.

A-11 8WMB settling until 8:30 AM

A-8 8WW

A-5 A-8 reuse

Analysis: 8WMB 383 c's @ S.T. (sample A)
280 c's @ S.T. (sample B)

(1st sample discarded)

M-1 600# Na_2CO_3 soln.

⑫ Air counts started going up slowly about 7 am; not over tolerance at shift change.

4/11/50 ① Took special C.T. sample 125 c/m. Cut steam back to 17th

8-7 ② Assisted Pinshaw in dumping remainder of U-35

Blauer material into W-7.

③ Washed + drained 205 stack.

④ Hanford containers sent on their way.

⑤ Run status

A1 - Heel Dissolving - Hold

A5 - MT

A6 - Batch B - neutralized

A-11 - Batch B heels + 8WW

A8 - 1st 8WC

A9 - 2nd metathesis

- ⑥ Received waste B30 to W4
- ⑦ Ph of neutralized Batch B - 7.
- ⑧ 8WW 35.1 c's s.f.
- ⑩ Maintenance started installation of line from Valve group #3 to the S. tank farm via the unground route.
- ⑪ Maintenance started replacing cross supports to steam & air lines in tank farm.
- ⑫ Checked Cell B tanks.

4/11/50 ① Finished melting out sulfur and buttoned up
4-12 reactor.

Schaich ② Special C.T. ran 138 c/pm.

③ Started stripping activity off Col #2 and boiling down in still at shift change.

④ Continued evaporating.

⑤ Run Status: A9 - Bid metathesis setting till 2 AM

A8 - 2 parts 8WC

A6 - Tent. 6WMB

A11 - 8WW + heels.

A1 - Heel dissolving - hold.

4-12-50 ① Cooled E1 & E2 at 1am; removed extracts, marked samples

12-8 320C1 & 321C1; transferred extract to crude evaporator in

OLSON 204 bldg. & started boiling down; started reextraction in E1 & E2 at 2am.; 1500 ml approx. at shift change..

② Checked Schallert's column in 706-C

③ Checked Pressley's column in 910 bldg; shut down at 4am.

④ Checked steam engine at 205 stack

⑤ Checked blowers and dampers.

⑥ Continued operation of evaporator at T.F. at 17#;
 turned in special C.T. sample at 7am; 665 c/m/mil *

⑦ Run Status:

A-1 Heel dissolving hold.

A-6 neutralized 6WMB

A-8 8WC + 8WCW

A-9 3rd mettathene → B-12 at shift change **)

A-11 8WW + heels.

Analysis: 8WC 624 c's S.T. (recheck 620.4 c's S.T.)

(* cut back on evap. to 15#)

(8WCW in lab)

(** 12.5 R/hr reading at B-11 falling during transfer)

4/12/50 ① 8WCW - 512 S.T. A9 Rinse 2005 S.T.

8-4 ② set up equipment for glassware. Put
 Blauer periscopes in cell + cubicles

③ Took special sample of W-15 for Barker 206-c.

④ Periscope man is repairing a hyscope.
 The mirror motor is shot.

⑤ Special C.T. ran 85 c/m after cutting steam
 back to 15#

⑥ Rechecked zero on B6 instruments.

⑦ maintenance continued repaired work on
 tank farm fence, pipe braces, and underground
 transfer line.

⑧ A.H.C. product truck is back of 706-D building

⑨ Run Status

B-12 Electrolyzing at 25 amperes. ^{08/14} 6/14

- 4/12/50 ① Put 1 liter H_2O thru B23 into B20. Solution came
4-12 thru clear. Filtered at 1" vac in 6 minutes.
Schaich ② Steamed B19 head heater for 1/2 hour.
③ Shut down Schaller's column until P^{32}
product is taken up.
④ Shut off Pressley's column at 11 PM.
⑤ Started Pb removal in B12 - see Blower.
⑥ Boiled down I¹³¹ in Am. 10 "C" Bldg.
⑦ Boiled down H^{235} on 3rd level and shut down.
⑧ 6P - approx 4360 c's S.T.
⑨ B6 SP line leaking at weld above valve.
⑩ Running thru ^{P^{32}} setup at shift change. Verbal 12-8.
⑪ Continued evaporating.
⑫ Run status: A cell same as 12-8
B12 - 1st part 3WFB
B6 - MT.
B20 - Product.
⑬ High air count during 6P sampling. Evacuated
C + D Bldg for 45 minutes

- 4-13-50 ① Continued evaporation at T.F.
12-8 ② Carried through P^{32} run at 204 bldg; going through
OLSON last column at shift change.
③ Run status
A cell same as 4-12
HCl ether 247 c's S.T.
3WFB 45 c's
B-6 rinse 28 c's S.T.
B-12 1st part lead removal.

B-6 empty

B-19 product evaporation

④ L.S.T. was at 5:15 A.M.

4/13/50

8-4

Sachs

① Skyshine read 42.5 R/hr at 9 hours after L.S.T. This amounted to 4800 C's. Product looked very good; white and down at the bottom of the cone.

② Pulled the Product and put it on truck. Had H.P. smear it. Disposed of red cans from 3rd level and threw adapter, pins etc in the barrel of decontamination room.

③ I don't think we got an inventory. The 3WPN is in A5; the 3WPB is still in B3 and has been sampled. Otherwise, everything else is the same.

④ Continued Evaporating.

⑤ The small S.S. blower was off all day so

⑥ maintenance could work on installation of steam turbine.

4/13/50 ① Product truck left about 4 PM.

4-12 ② High air count in "D" Bldg from 4:15 to 4:45 PM.

Schair ③ Took hot can reading 700 R to B6. Red truck was left there.

④ Took 250 ml glassware rinse and left carrier on E. Platform. Shift all had hot clothing from chain

⑤ around skyshine.

⑥ Cleaned up hot papers, started dec. of adapters sampling equipment & tools.

- 6-11-50 1. Shut down 900 Area elect. Blower because
 12-8 the belts were smelling they were so dry. Turned
 DCK on the steam turbine at 3:10 A.M. Maint. and
 trying to fix the belt or replace it with a new
 one if they can find it.
2. Brought the charging machine down to
 706-D with 16 slugs in it.
3. Put the 1st. part of coating removal solution
 into A1 and cooled it down.
4. Checked 910 Bldg.
5. Maint. did not repair the elect. blower for
 900 area they couldn't find a new belt.

- 6-11-50 (1) Continued operation of evaporator at 200 gal/hr.
 8-4 (2) Started up small blower; shut down steam turbine;
 OLSON after maintenance checked; running OK.
- (3) Decontaminated Phoenix carriers; HP smeared +
 found bottom of orange-colored carrier (X-39724) hot;
 re-washed + also re-washed all four Chicago carriers;
 they are all ready to be re-smeared; one Phoenix carrier +
 Chicago drum ready for green toy.
- (4) Checked dampers + blowers
- (5) Did not have time to move I¹³¹ carrier from 706-D to pile.
- (6) Run status:
 A-1 3rd water wash of 1st coating removal at shift change.
- (7) Made up 35% NaOH + 60% HNO₃ in scale tank
 for 2nd coating removal.
- (8) Had trouble with slugs sticking in slug-charger basket
 several times during the slug loading; basket needs repair
 or replacement.

RUN
 42

- 6/11/50 ① Continued evaporating. cut rate back to 200 gal/hr.
 4-12 ② Took FI charging machine to 105 Bldg.
 Shick ③ Drained and doped pipe plugs on Phoenix
 carriers. Recleaned & resmared ^{ports} hot on
 carriers & pots. Everything okay.
 ④ Checked 910 Bldg.
 ⑤ Run Status: A1 - Batch A dissolving
 ⑥ Reset timing devices on some of the 900 area
 outside lights.

6/12/50

- 12-8 ① Lemons called in. Won't be in today.
 Sachs ② Run Status:
 A1 - Batch A dissolved, diluted and cooled. Sample
 circulating.
 ③ Dumped Acids.
 ④ Continued running T.F. Evaporator at 200 gal/hr.
 ⑤ Brought Pile Units down to 902 Bldg.
 ⑥ Checked hose in 910 Bldg.

- 6-12-50 ① Continued operation of evaporator at T.F. at 200 gal/hr.
 8-4 ② Checked dampers & blowers; maintenance used belt
 OLSON dressing on small blower belts; shut-down steam turbine
 and started small blower.
 ③ Phillips worked on phosphorus⁺ - removed E1 + E2 extractions
 from Bayle - Bayle to ~~204~~ Bldg.;
⁺ also filled sulfur cans
 ④ Instrument man working on A-5 ring balance (wh)
 ⑤ Moved slug charger to 903 Bldg.
 ⑥ Analysis: IHA 2067 c's at S.T; 66.6 c's/slug; 36.6 slugs.

⑦ Run status:

A-1 Batch B dissolving

A-9 Batch A extraction settling cold until 4:25 pm.

⑧ Getting 4% caustic M-1 to M-10

6/12/50 ① Checked FI dissolving in 706-C Bldg.

4-12 ② Filled three sulfur cans at cell V.

Schaich ③ Boiled down crude at 204 Bldg.

④ 8WMA - 220 c's S.T.

⑤ Finished Shields' evaporation in 907.

⑥ Placed the sample line at the N of D.B. ^{manhole} #20 that it samples 706-HB line directly.

⑦ Continued evaporating at 200 gal/hr.

⑧ Plated 30 Co needles $\frac{1}{8}$ " x 1" from Beaker #10 to Beaker #12. Made up Cu & Ag plating solutions.

⑨ Run Status: A1 - haul (dissolving not started)

A6 - 6WMA sampled

A9 - Batch B extraction adding #254

A8 & A11 - MT

⑩ Pulled E1 extract at 11 PM. Sampled and took crude to 204 Bldg.

⑪ The Co carrier with 15 coated pellets is sitting in pickup.

⑫ The sample line into 706 HB line slips out. Please check.

160

6/13/50 ① Run Status:

12-8 A1 - Heat Dissolving

Sachs A9 - Batch B extraction settling cold until 8:55 a.m.

A8, A11, A5, A6 - M.T.

② Plated 14 cobalt needles out of Beaker #10 and returned to Pile Bldg. This finishes off Beaker #10. The stopcock on the waste flask will have to be repaired before ~~starting~~ ^{plating} operations can be continued.

③ Had trouble with I¹³¹ off-gas all shift. Simply blowing the pot won't drain the system. The slide valve at the stack manifold must be closed and the line allowed to drain back into the Pot. Cooled dissolver to 80°C while we tried to get off gas from 12:10 p.m. until about 1 a.m.

④ Had pipefitter replace broken valve in A6 off-gas manometer.

⑤ Brought down and melted out 4 sulfur cans. Started E1 extraction at 5 a.m. Buttoned down E2 at 7:45 a.m. Boiling down at 304 Bldg.

⑥ Analysis:

6WMA - 215 C's S.T.

1MB - 2164 S.T.

⑦ The A6-wa jet isn't working properly. Had a hard time getting rid of 6WMA.

6-13-50 ① Continued operation of evaporator at T.F. at 200 gal/hr

8-4 ② Lemms worked on P³² run

OLSON ③ Checked dampers & blowers

Became
Batch C
TW

- ④ Will the 4-12 shift switch valves outside 706-D to by-pass the Trion precipitator and go directly to the filters; now set to go thru the Trion units.
- ⑤ Took special manhole samples at "isotope area" + "706 HB drain" manholes at 11am + 3pm.
- ⑥ Plated 3 Co pellets; each $\frac{1}{8} \times 3$; from beaker #11; repaired stopcock on waste flask at 908; left in carrier behind barricade
- ⑦ Analyses: these are to go back to beaker #10
- 8 WMB: 190 c's at S. T. (average)
 - special A-1 heel dissolving: 1250 c's
- ⑧ Heel dissolving to be added to A-9 and a 3rd extraction to be run; another heel dissolving to be made.
- ⑨ Small blower, ^(75HP) shut-down to be checked & repaired; started steam turbine.
- ⑩ Run status:
- A-1 #1 MC in lab (diluted)
 - A-9 3rd extraction (batch c)
 - A-11
 - A-5 1 batch Na_2CO_3 added
 - A-6 ~~#1~~ #6 WMB (not sampled) (circulating)
 - A-8 MT

6/13/50 ① Had a spurt of air activity in 706-D while getting 4-12 from A6-195 for neutralization.

Schaid ② Turned off steam turbine and out in 900 area fan. Switched "D" Bldg ventilation back to filter house.

③ Checked Rimshaw's column in 910 Bldg.

④ Washed out W14 and jettied to W5.

⑤ Valve group four needs to be lettered.

- ⑥ Pulled extracts at Bagle Bagle and submitted samples to lab. Boiling down at 204. Started retraction.
- ⑦ Returned to corridor with plated pellets to 105.
- ⑧ 6WMB analysis - 52 c/s S.T.
1MC " " - 1325 c/s S.T.; 20.5 degs; 75.2 c/s ^{plating}
- ⑨ Maintenance replaced WS to Xmas tree slowdown valve and unplugged drain at PB #1.
- ⑩ Run Status: A9 - Batch C setting till 1⁴⁵ AM.
A1 - fuel dissolving
A6 - Heat. 6WMB
A5, A8 + A11 - MT
- ⑪ Continued evaporating. Boiled down run due to 6 foamover. Start next run at 15 psi.
- ⑫ Finished boiling down FI at Run 10.
- ⑬ Filled 2 sulfur cans at cell V.
- ⑭ There is a gas leak somewhere in Cor D Bldg. Smells strongest outside of Bldg.

6/14/50
12-8
Socho

- ① Continued discarding Rinschew's column wash in 910 Bldg.
- ② Removed P³² extracts from E1 and E2 at 3 am. and reextracted. Both buttoned up at 4 am. Took crude to 204 Bldg. Boiling down at shift change.
- ③ The Evap to W6A valve pin is gone again. Discovered when preparing to dump Run 477 at or 1:30 am. Unfortunately the valve was closed and there was no way to get the stuff to W6. Emptied all tanks ^{to WS} and washed same.

Added 10" of H_2O and 4 canboys of HNO_3 to Evp, boiled for thirty minutes and sent contents of Evp. and c.t. to W5. Filled all tanks with H_2O and hosed down floor. H.P. survey showed 5.5 FT with P.C. Cutie Pie on floor under valve. There is half a box of citric acid under N.W. corner of Evp. It's soaking there at shift change.

④ Run Status:

A1 - heets dissolved, cooled and sampled.

A8 - Four P.F.H.s of 8WW

A9 - Last Extraction wash settling until 9 a.m.

A11 - 8WMC settling until 8:10 a.m.

⑤ Analysis 8WMC - 475 S.T.

⑥ Receiving Fan seals into W1 and W2 at shift change.

6-14-50 ① Completed repair evap. to W6A pin at evaporator and
8-4 2 damping units were installed on evaporator h.h. lines.
OLSON Ran evaporator at 200 gal/hr.

② Lemmo worked on P³² run at 204

③ Checked blowers + dampers; shut-down small blower for maintenance to install new belts; turned on steam turbine.

④ Maintenance working on signs for valve group 4.

⑤ Run status:

A-1 same as 12-8

A-11 8WW

A-5 6WMC

A-6 MT

A-8 1/3 PNC

A-9 2nd metathesis: digesting until 4:05 p.m.

- ⑥ Phillips worked on filling sulfur cans
 ⑦ Analysis:
 6 WMC 64 c's at S.T.
 8 WW 52 c's at S.T.

6/14/50* ① New fan belts are rubbing guard on small fan.
 4-12 ② How about having fan on 3rd floor "D" Bldg fixed
 Schleich or replaced.

- ③ Shut down steam turbine and started molten.
 ④ Finished boiling down FI in Rm 10.
 ⑤ Pulled E1 + E2 extracts and boiled down at
 204 Bldg. Finished melting out sulfur and
 started E1 extraction at 5:30 PM.
 ⑥ Changed pumps at No 00 manhole and brought
 antifoam pump back to E1. No more 900 area samples.
 ⑦ Scrubbed down floor at Page Bldg.
 * ⑧ Maintenance tightened belts on small fan.
 ⑨ Three lights out at 900 area stack.
 ⑩ Stored sulfur can movable pig in 905 Bldg.
 ⑪ Emptied Cell B tanks.
 ⑫ Covered product + glassware rinse carrier.
 ⑬ Run Status — A9 - 3rd metathesis setting till 1 AM

A8 - 2 parts SMC

A5 - 6 WMC ment.

A11 - Heels + 8 WW

⑭ P³² product is in final evaporator just about
 to dryness and ready to take up. Picked up
 most of the cake left in P-1. Final evaporator
 should be cleaned or replaced.

⑮ Continued discarding Rimolow's column wash at 910.

6/15/50

12-8 ① Brought 3 $\frac{1}{8}$ " x 3" Co needles to 908 From Pile Sacks Bldg. Went only through the Cu plating step and transferred pellets back to barricade. Repairs will have to be made before further plating can be done. It's impossible at present to draw solution from the plating beaker to waste flask.

② Run Status:

A11 - 8wv, 8wc, 8wcv, 6wmc heels.

A8 - M.T.

A9 - 4000 ml HNO_3 for A9 wise sample. Sparging and circulating sample at shift change.

A6 - M.T.

A5 - Neutralized 6wmc.

B12 - Product electrolyzing at 15 amps until 10:15 AM.

③ Analysis: 8wc - 610 S.T.

④ Continued Evaporating on tank Farm.

⑤ Maintenance tightened belts on 75 H.P. blower.

The belts were striking the top of the guard.

⑥ Completed P₂ run at 204. Took crude from E1 to 204 and completed boiling it down. E1 buttoned up at 5 am.

⑦ Checked Rimolow's column in 910 Bldg.

6-15-50 ① Run status:

8-9 Same as 4-12

OLSON B-12 Product electrolyzing at 25 amps until
5:15 pm

② Analysis:

8 NCV 878 c's at S.T.

③ Continued operation of evaporator at 200 gal/hr.

④ Plated 3 Co pellets; $\frac{1}{8}$ " dia. x 1" long; from beaker #11 - returned to beaker #10; pellet carrier reloaded with 3 unplated pellets from beaker #11.

⑤ Maint. lagged lines in 706-D.

⑥ Cleaned product + G.W.R. plugs; put gasket in product plug; cleaned out product cone.

6/15/50 ① Obtained a sulfur tube from glass shop and
4-12 left at Eagle.

② Steamed head heater for 1 hr.

③ Washed transfer vessels, ran 1 liter of H₂O thru B20 in 5 1/2 min., put in periscopes, and prepared glass PB.

④ Shielded B1 heater.

⑤ ~~W12~~ W12 automatic switch is not working properly. Emptied tank but did not turn off jet.

⑥ Shut off Rimshaw's equipment

⑦ Run Status: Product filtering

⑧ Took up extract and boil down. Started thru equipment.

6/14/50 ① Brought two sulfur cans down from File 12-8 and melted out. Started extraction in E2 at Sachs 6:30 A.M.

② Continued P³² Run at 204 Bldg. Stuff is now in S2 evaporator.

③ Run Stakes: Last Fifty ml of H₂O sparging on top of B20R disc preparatory to going to B19.

④ Scrubbed 1st and 2nd levels in 706D Bldg and 901 locker room.

⑤ Continued Evaporating.

6-15-50 ① Continued operation of evaporator at 200 gal/hr.

8-4 ② HP smeared 1st floor south + 3rd floor

OLSON 706-D -- OK;

③ Cleaned up 2nd floor 706-D; HP smeared + we re-cleaned; HP ~~did not have time to~~ resmeared; 6 "hot" spots.

④ Papered bottom of product pot.

⑤ Checked dampers + blowers.

⑥ Lemons worked on P³² at 204 bldg.

⑦ #1 P sampler on 2nd floor "hot" -- about 10R/hr inside.

⑧ Run status:

- Skyshine taken: 36.7 R/hr . L.S.T. 6:30 am
at 3:30 pm 4140 C's ~~██████████~~

- Plug in product carrier; carrier ready to come out.

- 6/16/50 ① Pulled product and shipped at 5:10 PM.
4-12. Very little radiation other than product.
which ② Took glassware rinse and stored. East of
cell #.
- ③ Washed down 3rd level and hot spots on
2nd level. H.P. has smeared but not
counted 3rd level.
- ④ Took up attraction at angle and took up
product at 204. Drain in hood plugged
and contaminated floor.
- ⑤ Cleaned and stored all but three scopes
which are in cubicles. Cleaned & stored
sky shine plate and source. Clean and smeared
air line hose, 2 masks, and one sewer
auger. The masks & hose are okay. Two more
mask to be cleaned & remove box.
- ⑥ Sent rinse thru part of glassware. 3WPB held
up the work. B207 to B19 valve is plugged.
- ⑦ Finished PB removal and sampled.
- ⑧ Jetted one batch of waste to W9.
- ⑨ Scrubbed 204 sdy floor and started boiling
crude. It is going at shift change.
- ⑩ Continued evaporating.

~~1-17-50~~

6-17-50-1-CONTINUED EV. 200 GAL/HR.

12-8 2-LEMONS ON P32 ALL SHIFT.

3. FINISHED TANK WASHES IN CELL'S A & B, ALSO
GLASSWARE.

4. SPRAYED B-1 BLISTER WITH WATER WHICH
HAS NO GOOD.